REMARKS

Claims 1-21 are pending in this application. In the Final Office Action, the Examiner maintained the previous rejection of the pending claims for the same reasons as presented in the Office Action dated July 27, 2005. In the Office Action, claims 1-21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2001/0036823 to Van Lieshout et al. (hereinafter "Van Lieshout").

The present invention is related to a radio resource management function for managing radio resources using a central database to store network data.

Van Lieshout discloses a radio access network (RAN) where information may be sent to a mobile radio unit using a radio channel shared by other mobile radio units. User information is transported on logical "transport bearers" over interfaces between the different nodes in the RAN. To facilitate the transfer of information, a transport bearer is established between a first RAN node and a second RAN node. A second transport bearer is established between the RAN nodes to transport control information. The first RAN node transmits the control information over the second transport bearer to the second RAN node. (See Abstract and paragraphs 0003, 0005, 0020 and 0040-0041.)

The Examiner asserts that Van Lieshout discloses a radio resource management function using data from a centralized database. The Examiner contends that the CRNC performs call admission control for all the resources of the base stations it is controlling (see paragraph 0019). The Applicants respectfully disagree.

Claim 1 of the present invention discloses a radio resource management function for managing radio resources using data stored in a central database. By storing the data in a centralized database, the present invention eliminates the need to transport the control data from the CRNC to a network element and maintains data integrity. This is supported by the disclosure in paragraphs 0024-0025 of the specification of the present invention which reads as follows (emphasis added):

> The database 112 serves as a centralized storage for the RNC 108, and can be used by any algorithm that needs the type of information that would be stored at the RNC 108.... The database 112 is preferably centralized at the C-RNC layer 110 so that the information can be accessed by all of the instances of the RRM functions 116-122 from different cells 104...

Van Lieshout discloses a method of transporting data signals between RAN nodes with the control information necessary over shared radio channels to optimize use of the shared physical channel resources on the radio interface (see paragraphs 0004, 0006, 0028 of Van Lieshout). In contrast, the present invention discloses a system and method for storing information regarding the allocation and availability of physical resources in a radio communications system. The centralized storage of information at the CRNC in the present invention offers advantages over existing methods. For example, the information stored in the centralized database can be accessed by various RRM algorithms and data integrity is maintained (see paragraph 0028 of the present application).

The present invention discloses a method of allocating physical resources based on an updated database so that algorithms running in the CRNC can make decisions based upon the most recent resource allocation information (see paragraph 0027). Further, the present invention triggers call admission control based upon an incoming call notification (see paragraph 0029).

In contrast, Van Lieshout performs call admission control when the CRNC sends control messages over a transport bearer to provide mobile devices with the information necessary to decode data transmitted on a shared radio channel (see paragraphs 0030, 0033). Since Van Lieshout discloses transporting data and not storing the data in a centralized database, Van Lieshout does not teach or suggest all of the elements of claim 1.

Claims 2-12 depend on claim 1 and the applicants respectfully submit that claims 2-12 are patentable for the same reasons as claim 1.

The Examiner has rejected claim 13 as being anticipated by Van Lieshout paragraphs 0004-0006. Although Van Lieshout does not disclose providing data storage, the Examiner contends that the storage of this information has been disclosed by paragraph 0019 of Van Lieshout because it is necessary for the CRNC to perform call admission control duties on network resources. The Applicants respectfully disagree.

As indicated above, Van Lieshout discloses how certain control information communicated to a mobile radio terminal can be effectively transported in a RAN (see Abstract and paragraphs 0028-0029). In Van Lieshout, call admission control is performed by transporting control information on logical transport bearers between different nodes in the RAN. Unlike the present invention, Van Lieshout does not disclose providing data storage, storing resource allocation information, accessing the data storage, or updating the data storage, because the storage of this information is not necessary. Van Lieshout is limited to the control information to provide mobile units with the information needed to decode the data transmitted on shared radio channels (see paragraphs 0004-0006). Data storage is unnecessary because Van Lieshout does not monitor the allocation and availability of physical resources or gather the control information in the communications system.

Instead of performing call admission control by transporting control information, the present invention stores radio resource information in a central database. Unlike Van Lieshout, a centralized database is necessary to record the allocation of physical resources since the system does not transport control information. This process ensures that the algorithms make decisions based on the most recent resource allocation information. Without a centralized database, there is a processing delay because the CRNC needs to query several different entities to gather all of the control information (see paragraph 0025 of the present application). This manner of data collection is inefficient and creates the risk that some required information will be unavailable. Since none of the elements of claim 13 are disclosed in Van Lieshout, Applicants respectfully submit that claim 13 is patentable over the prior art.

Claims 14-20 depend on claim 13 and Applicants respectfully submit that claims 14-20 are patentable for the same reasons as claim 13.

The Examiner has rejected claim 21 as being anticipated by Van Lieshout paragraphs 0004-0006. As mentioned above, Van Lieshout does not disclose providing data storage or storing commonly used data in a central database. Van Lieshout fails to disclose the claimed invention because it is limited to using transport bearers and sending control information rather than using a centralized database to store and manage radio resources.

Van Lieshout does not teach or suggest using a centralized database to avoid using transport bearers. Van Lieshout does not disclose initializing a central database, storing operations and maintenance information in the central database, retrieving cell data and wireless transmit/receive unit data from the central database, or storing information regarding the resources allocated to a newly admitted call in a central database. This is confirmed from the disclosure of Van Lieshout in paragraph 0003, which reads as follows (emphasis added):

> A first transport bearer is established between a first RAN node and a second RAN node to transport data ultimately to be transmitted on the shared radio channel. A second transport bearer is established between the first and second RAN nodes to transport control information originated in the first RAN node that relates to the first transport bearer data. The first RAN node then transmits the control information over the second transport bearer to the second RAN node.

Since none of the elements of claim 21 are disclosed in Van Lieshout, Applicants respectfully submit that claim 21 is patentable over the prior art.

It is respectfully submitted that the remarks made herein place pending claims 1-21 in condition for allowance. Accordingly, entry of this amendment as well as reconsideration and allowance of pending claims 1-21 are respectfully requested.

If the Examiner does not believe that the claims are in condition for allowance, the Examiner is respectfully requested to contact the undersigned at 215-568-6400.

Respectfully submitted,

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